PIH15

ECONOMIC EVALUATION OF ANALGESIC MANAGEMENT AFTER TOTAL ABDOMINAL HYSTERECTOMY AT THE SOCIAL SECURITY MEXICAN INSTITUTE

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OBJECTIVES: The use of multimodal analgesic management has been implemented for minimizing adverse events and to improve the patient recovery process which will have a significant impact on clinical and economic outcomes. The aim of this study was to develop an economic assessment of parecoxib, ketorolac and morphine for the treatment of postoperative pain (POP) for patients after total abdominal hysterectomy at the Social Security Mexican Institute (IMSS) from an institutional perspective. **METHODS:** A Bayesian decision-tree model was developed to simulate costs and health outcomes over a 6-day time period in patients treated with multimodal analgesic. Comparators assessed were: morphine (61.5 mg/day) plus parecoxib (40 mg/day); morphine (61.5 mg/day) plus ketorolac (90 mg/day) and morphine (61.5mg/day) alone. The effectiveness measure was: percentage of successful response without adverse events(AE) meeting the highest possible score for patient's global evaluation survey (excellent). This survey has been previously validated in Mexico. Costs and resource use were collected from hospital records related to patients undergoing total abdominal hysterectomy at IMSS in 2008 (n=98). Transition probabilities were collected from international published literature and model was calibrated according to international pharmacoeconomics guidelines. One way and probabilistic sensitivity analyses were performed by Monte Carlo Simulation second-order approach. **RESULTS:** Percentage of successful response without AE resulted for parecoxib in 35%, followed by ketorolac with 24% and morphine with 21%. Estimated cost per patient treated were lower for ketorolac (US$ 5,309.20) followed by morphine (US$5,343.96) and parecoxib (US$5,375.78). No meaningful statistical differences were found in costs among competing alternatives ($p>0.05$). ICER for additional successful response was US$ 601.29 for parecoxib against keterolac. Acceptability curves showed that parecoxib is the most cost-effective therapy with 90% at a willingness to pay of US$4,500. **CONCLUSIONS:** Parecoxib represents a cost-effective analgesic alternative for POP management in patients who underwent abdominal hysterectomy at the IMSS.

PIH16

COST-EFFECTIVENESS OF DESVENLAFAXINE FOR THE TREATMENT OF VASOMOTOR SYMPTOMS IN BREAST CANCER PATIENTS IN MEXICO

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OBJECTIVES: Treatment of vasomotor symptoms (VMS) in women with breast cancer (BC) represents a challenge while the use of hormone replacement therapy (HRT) in these patients could be not suitable. The purpose of this study was to estimate the cost-effectiveness of pharmacological treatments for VMS in BC patients from an institutional perspective. **METHODS:** A Markov model was performed to estimate health and economic consequences in a time horizon of five years (quarterly cycles). Effectiveness measures were: reduction of hot flashes events and QALY's gained. Comparators assessed were: conjugated estrogens (CE; 0.625mg/day, only used in hysterectomized women), CE+medroxyprogesterone (2.5mg+0.625m/day, only used in non-hysterectomized women), tibolone (2.5mg/day), no treatment (no candidates to HRT) and desvenlafaxine (100mg/day) as reference treatment in all indications. Transition probabilities were collected from published data. Resource use was obtained from clinical files (n=140) from Instituto Mexicano del Seguro Social (IMSS) and includes pharmacological treatment for VMS, screening for HRT eligibility and side effect management. Official institutional costs were used. Probabilistic sensitivity analyses were performed and acceptability curves were constructed. **RESULTS:** Compared to no treatment, desvenlafaxine resulted more costly (+US$1,072.68), but avoided 2,753.8 more hot flashes (ICER=US$0.39/additional hot flash avoided) and gained 0.75 QALY's (ICER=US$1,430.24/QALY gained) in no candidates to HRT. In hysterectomized women, desvenlafaxine cost was US$2,723.76 and dominates CE (incremental: +US$354.64; +441.45 hot flashes, -0.16 QALY's) and tibolone (incremental: +US$564.94; +811.74 hot flashes; -0.21 QALY's). In non-hysterectomized women, desvenlafaxine cost was US$2,866.51 and dominated tibolone (US$3,522.33; 2,297.82 hot flashes and 0.59 QALY's) and CE+medroxyprogesterone (incremental: +US$855.34; +1,764.87 hot flashes; -0.38 QALY's). Acceptability curves showed that regardless willingness to pay, desvenlafaxine is likely to be cost-effective against competing alternatives. **CONCLUSIONS:** At IMSS, the management of VMS with desvenlafaxine is a cost-saving alternative for both hysterectomized and non-hysterectomized BC patients, as well as cost-effective for no candidates to HRT.

PIH17

COST-EFFECTIVENESS OF ABLE A FUNCTIONAL PROGRAM TO DECREASE MORTALITY IN COMMUNITY-DWELLING OLDER ADULTS

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OBJECTIVES: To evaluate the cost-effectiveness of an intervention, Advancing Better Living for Elders (ABLE), which was shown to reduce mortality in community-dwelling elders in a randomized trial. **METHODS:** 319 community-living older adults randomized to ABLE or no-treatment control group, were included in the economic analysis. ABLE involved occupational and physical therapy home and telephone sessions and home modifications (e.g., grab bars) to address functional difficulties over 12 months. Using a home-care agency perspective, the incremental cost-effectiveness ratio (ICER) was expressed as the additional cost to bring about one additional year of life. To account for potential variations in costs of implementing ABLE in different settings, two models were developed: cost of implementing ABLE and cost +10%. Probabilistic sensitivity analysis was conducted to account for variation on model parameters. Confidence intervals for the ICERs were calculated using the Fieller theorem method. **RESULTS:** Total cost of ABLE per participant after discounting was $908. In the secondary cost-effectiveness analyses total cost after discounting equaled (+10%) $999. By 2 years, there were 30 deaths (9 in ABLE and 21 in Control). Life year saved for ABLE was .944 compared to .868 for the intervention. Under assumptions of models 1 and 2 the additional costs for 1 additional year of life were $12,985 (95% CI: $4,637-$87,905); and $14,271 (95% CI: $5,068-$107,539); respectively. **CONCLUSIONS:** This economic evaluation suggests that investment in this program may be worth while depending on ones willingness to pay. However, confidence intervals varied widely due to small effect in reducing mortality.

PIH18

THE IMPACT OF LONG-TERM DISABILITY COSTS ARISING FROM IN-VITRO FERTILIZATION (IVF) TREATMENT: THE COST-EFFECTIVENESS ANALYSIS OF REDUCING MULTIPLE BIRTHS

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OBJECTIVES: We have examined the impact of long term disability costs arising from increased use of IVF treatments in relation to multiple births reductions in Canada. **METHODS:** Using the Canadian Fertility Cost Model we estimated the potential cost savings of reducing the number of multiple pregnancies in Canada. A series of probabilistic analyses were performed to account for the effect of uncertainty in long-term outcomes and disability costs on the cost effectiveness of reducing multiple births. Values for disability rates were sampled from a beta distribution and costs were sampled from a log-normal distribution. Simulation results were generated by simultaneously varying long-term disability rates and costs. The outcomes included age-specific net total costs, lifetime disability costs, and incremental costs per live birth. **RESULTS:** Assuming reductions in multiple birth rates equal to those reached by selected European countries, we estimated that, over the next five years in Canada, the multiple birth rates could be reduced from 28.8% to 13.4%. Using Monte-Carlo simulations, the potential cost savings range from $150 million to $558 million, and the reduction in over-all incremental cost per live birth range from $8,560 to $31,897. The proportions of children with lifetime disabilities range from 6.0% to 24.0% for current practice, and 4.3% to 17.3% assuming reductions in multiple births. For women under 35, aged 35-39, and over 40, reductions in over-all incremental cost range from ($9,555 - $35,616), ($7,814 - $29,977) and ($6,031 - $22,543), respectively. The bulk of cost reductions (ranging from 50% to 87%) would be attributable to reductions in disability costs. **CONCLUSIONS:** Our analysis shows that a reduction in multiple births would result in potential cost savings. The amount of variation in the long term outcomes and disability costs make the projections, nevertheless, highly unstable.

PIH19

COSTS AND EFFECTS OF A MULTIFACETED INTERVENTION TO IMPROVE THE QUALITY OF CARE OF CHILDREN IN DISTRICT HOSPITALS IN KENYA

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OBJECTIVES: More than 8.8 million children under 5 die globally before they reach the age of five. In Kenya, under five mortality rate was 74 per 1000 children in 2008. To improve care for seriously ill children, a multifaceted approach employing guidelines, training, supervision, feedback and facilitation was developed, for brevity called the Emergency Triage and Treatment Plus (ETAT+) strategy. We assessed the costs and efficiency of delivery of the ETAT+ strategy in district hospitals in Kenya. **METHODS:** A cost-effectiveness analysis from the provider's perspective was conducted alongside a cluster randomized study that compared the delivery of ETAT+ in four district hospitals in Kenya to four control district hospitals receiving a partial version of the intervention between 2005 and 2009. Effectiveness of the intervention was measured using 14 process measures that capture improvements in quality of care and span the assessment, diagnosis and treatment on admission in children under five. Economic costs were estimated through interviews with implementers of the intervention, accounting and clinical record reviews. An annual discount rate of 3% was used and one way sensitivity analyses were used to assess uncertainty. Incremental cost-effectiveness ratios (ICERs) were defined as the cost per percentage improvement in quality of care. **RESULTS:** The cost per child admission was US$ 54.74 in intervention hospitals compared to US$ 31.06 in control hospitals, while quality of care as measured by the 14 process measures was 23.05% higher in intervention hospitals than in the control hospitals. These results suggest an additional cost of US$ 0.85 to achieve a percentage improvement in quality of care. **CONCLUSIONS:** The delivery of ETAT+ as a multifaceted intervention yields significant improvements in quality of care but at a higher cost. Knowing what value decision makers place on quality improvement would be useful in making decisions about their adoption explicit.

PIH20

ECONOMIC EVALUATION OF THE USE OF EXOGENOUS PULMONARY SURFACTANTS IN PRETERM NEWBORNS WITH RESPIRATORY DISTRESS SYNDROME IN MEXICAN POPULATION COVERED BY THE NEW GENERATION MEDICAL INSURANCE

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